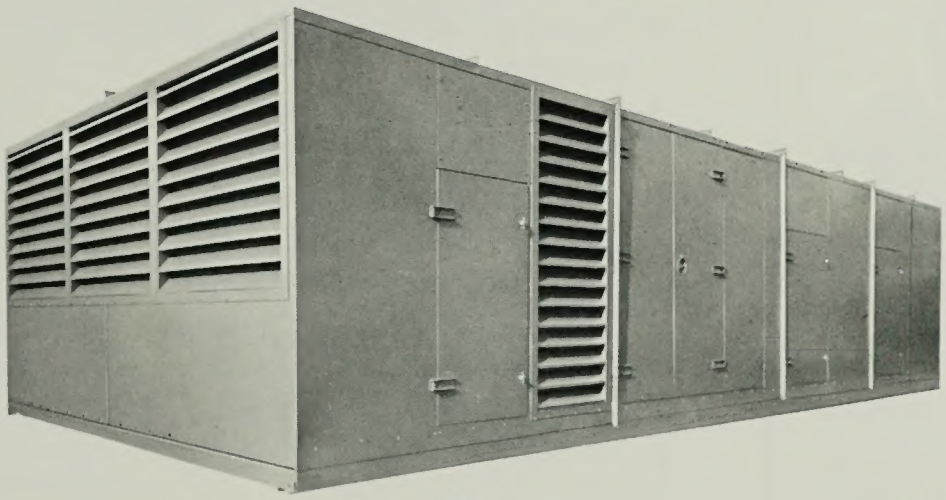
MARLO

ROOFTOP HEATING AND COOLING UNITS



YEAR AROUND HEATING-COOLING UNITS

The low silhouette design of Marlo rooftop units, the prime materials used in the modular construction, together with 44 years of custom fabrication experience in the Heating and Air Conditioning Industry, assures the user of high performance, reliability and years of trouble-free operation.

Where severe operating conditions are encountered or unusual applications must be considered, Marlo custom design units are available to meet almost every need.

COMPONENTS. The optimum in cooling-heating system design has been attained with the balance of minimum installation cost, minimum loss of usable space and maximum serviceability.

The Marlo rooftop environmental control unit includes all system components necessary to control room conditions during cooling, heating and intermediate seasons, with the exception of refrigeration plant and heat source. These components can, of course, be included to make up a complete rooftop package. However, where several units are required for building zoning, it is advantageous to have a single central chilled-water plant to facilitate maintenance.

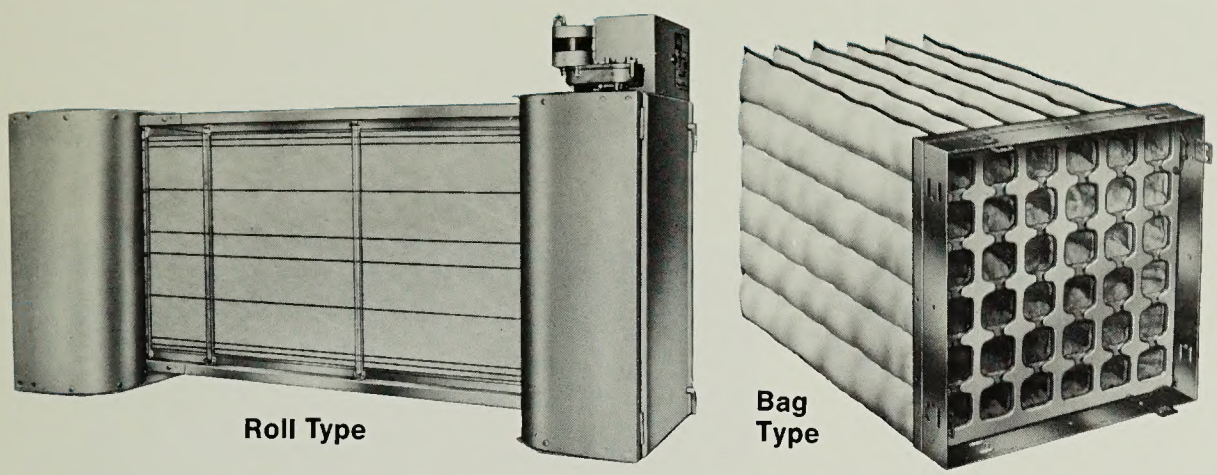
Marlo units are offered with complete flexibility of casing material and external finish, coil types and materials, fan types and arrangements, unit and drain pan insulation; filter types, internal piping location and access door arrangement. All water cooling coils are ARI certified and all fans are statically and dynamically balanced and are AMCA rated.

Units may be ordered with:

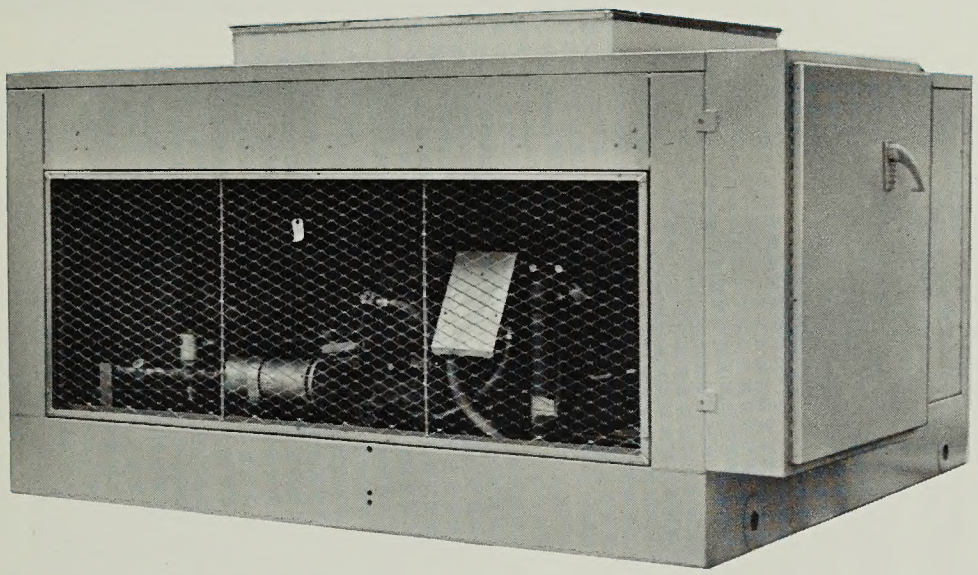
- Single or double wall casing for low or high pressure systems
- Roof curbs
- Unit-mounted or remote control panels
- Single zone, multizone or dual-duct arrangements
- Gas-fired boiler or heat exchanger
- Electric or remote source steam or hot water heating
- Integral return-exhaust air fans and economizer cycle
- Standard sizes from 6,000 to 40,000 cfm.
- Shipped in sections or completely assembled

Standard unit construction consists of Marlo formed base with angle iron supports for all components. Single wall casing panels, access doors and top are .071″ aluminum. Corner posts and intermediate posts are formed galvanized steel channel, welded to base. All panels are removable for complete access and gasketed access doors are provided for normal maintenance areas. Standard insulation is fire-retardant 1″ thick poly-urethane. Single and double-wall casings are available with up to 8″ insulation. External finish is optional—standard is air-dried grey enamel.

FEATURES AND OPTIONAL EQUIPMENT



FILTERS. Roll filters are standard and equipped with automatic over-ride control. Units are available with 2″ throw-away cleanable, bag-type, charcoal, HEPA or any combination to comply with pre-filter-final filter requirements.



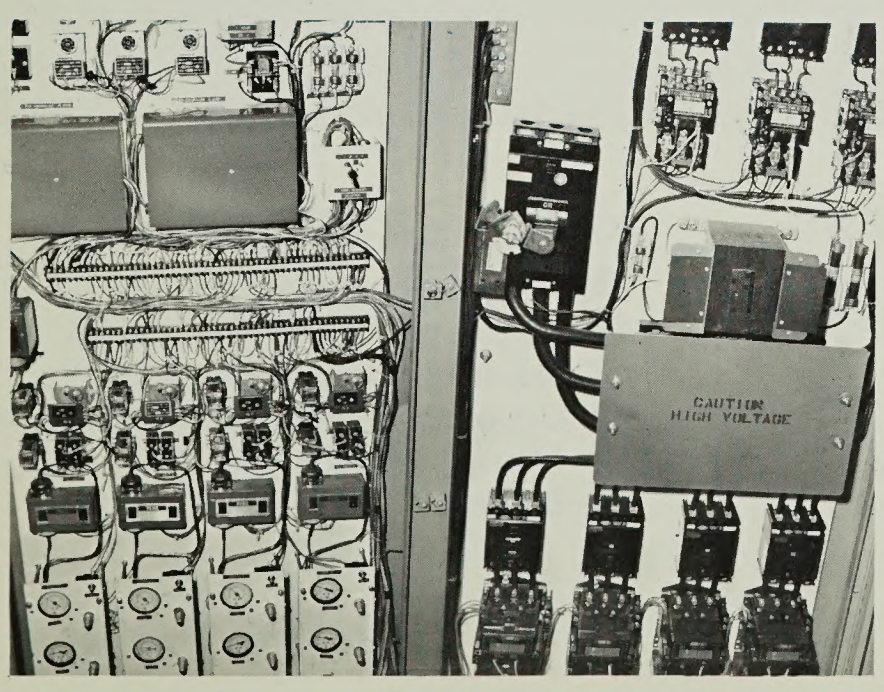
COMPRESSORS-CONDENSERS

Units are available with packaged refrigeration systems, including service valves, liquid solenoid valves, dehydrator strainers (replaceable core type), hot gas mufflers, liquid moisture indicators, forced feed lubrication system, oil level sight glass, crankcase heaters, suction and discharge gauges, code welded receivers with shut off valves, combination outlet and charging valve and pre-set spring-loaded relief valve.

Zinc-plated propeller fans are mounted on stainless steel shafts, which are belt driven by TEFC motors with adjustable bases. Expanded metal guards are mounted above and below the propeller fans.

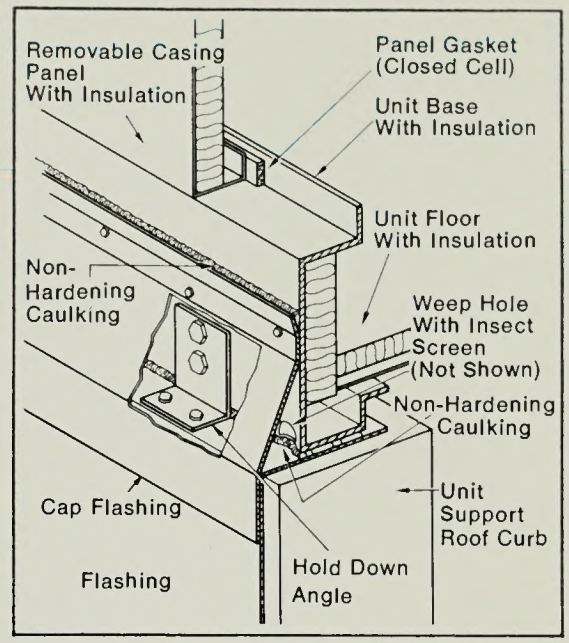
The weatherproof electric control panel contains high and low pressure cutouts, compressor contactors or starters, condenser fan starters, air handling fan motor starters, fused circuit protection (with time delay relay on dual compressors), terminal board, on-off switch and unfused disconnect switch in panel cover (dead front).

The panel is factory wired according to National Electrical Code standards.

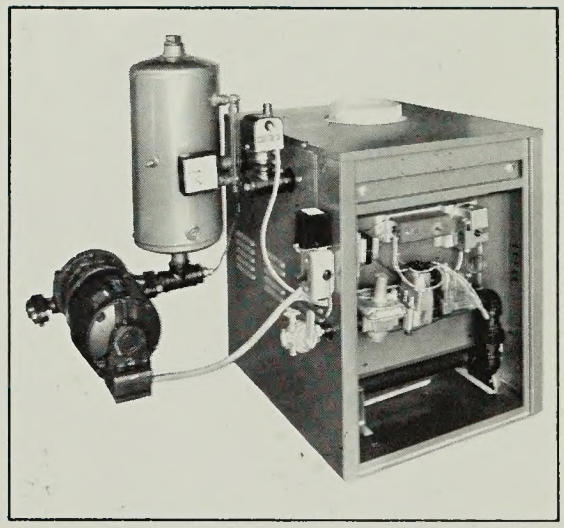


ELECTRICAL

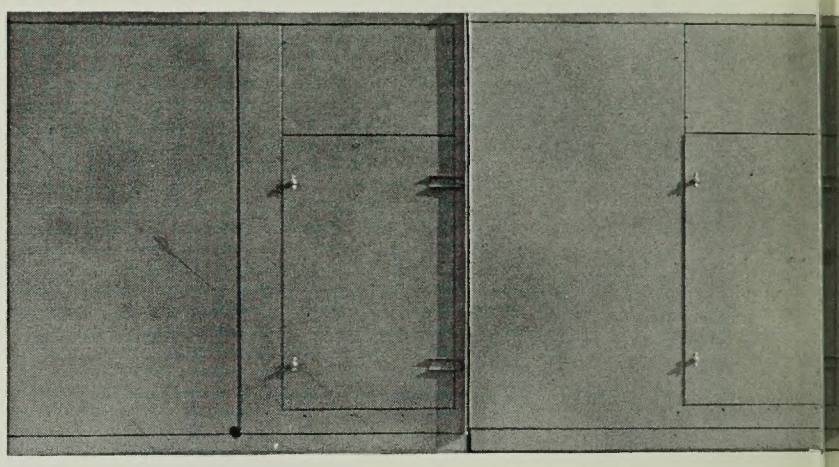
The wiring shown is typical for a four (4) compressor unit with three condenser fans with all necessary pressure, temperature and safety controls and gauges. Typical general purpose controls are utilized.



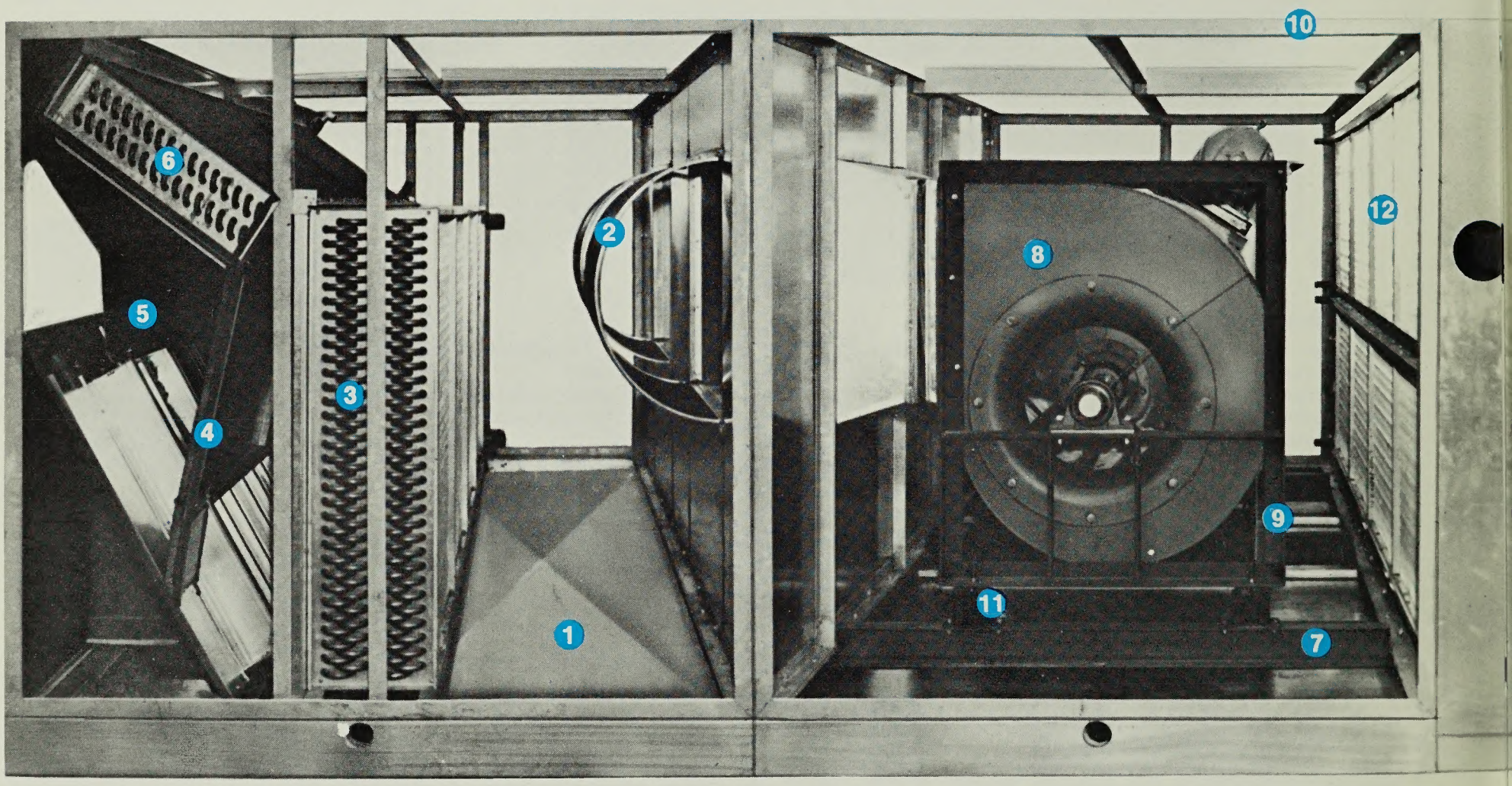
BASE. Each side is constructed of single-piece, heavy-gauge steel plate, electrically welded and reinforced to provide a high degree of rigidity. This single-piece forming allows for minimum field-installed flashing for watertight integrity. All unit components are supported by the base and all bases are provided with removable lifting lugs strategically placed for proper handling.



HEATING. Various heating arrangements are available, including electric, steam, hot water coils, gas-fired furnaces and indirect gas/oil fired hot water boiler. Electric, steam and hot water coils are available in all necessary sizes. Gas-fired furnaces with capacities up to 800,000 BTU input are available with power exhauster, stainless steel combustion chamber, two-stage burner controls and are A.G.A. approved. Plenum temperature controls are provided where specified.



SUPERIOR CONSTRUCTION FOR

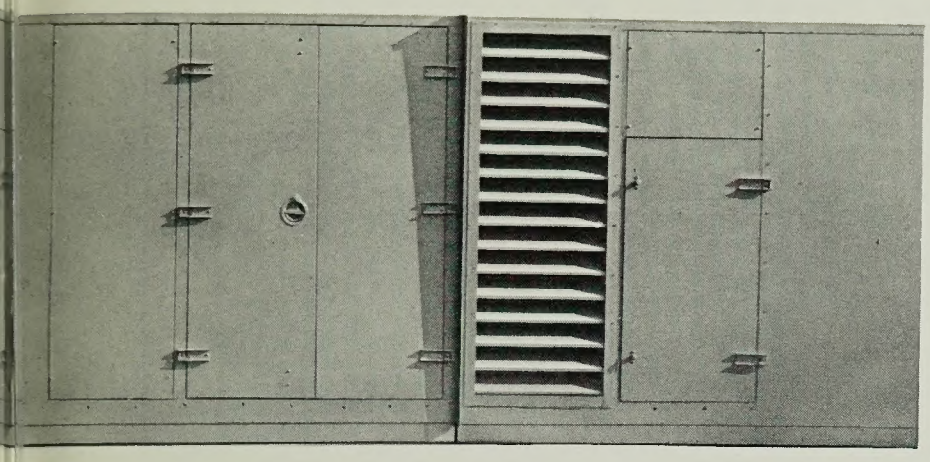


MULTIZONE COIL SECTION

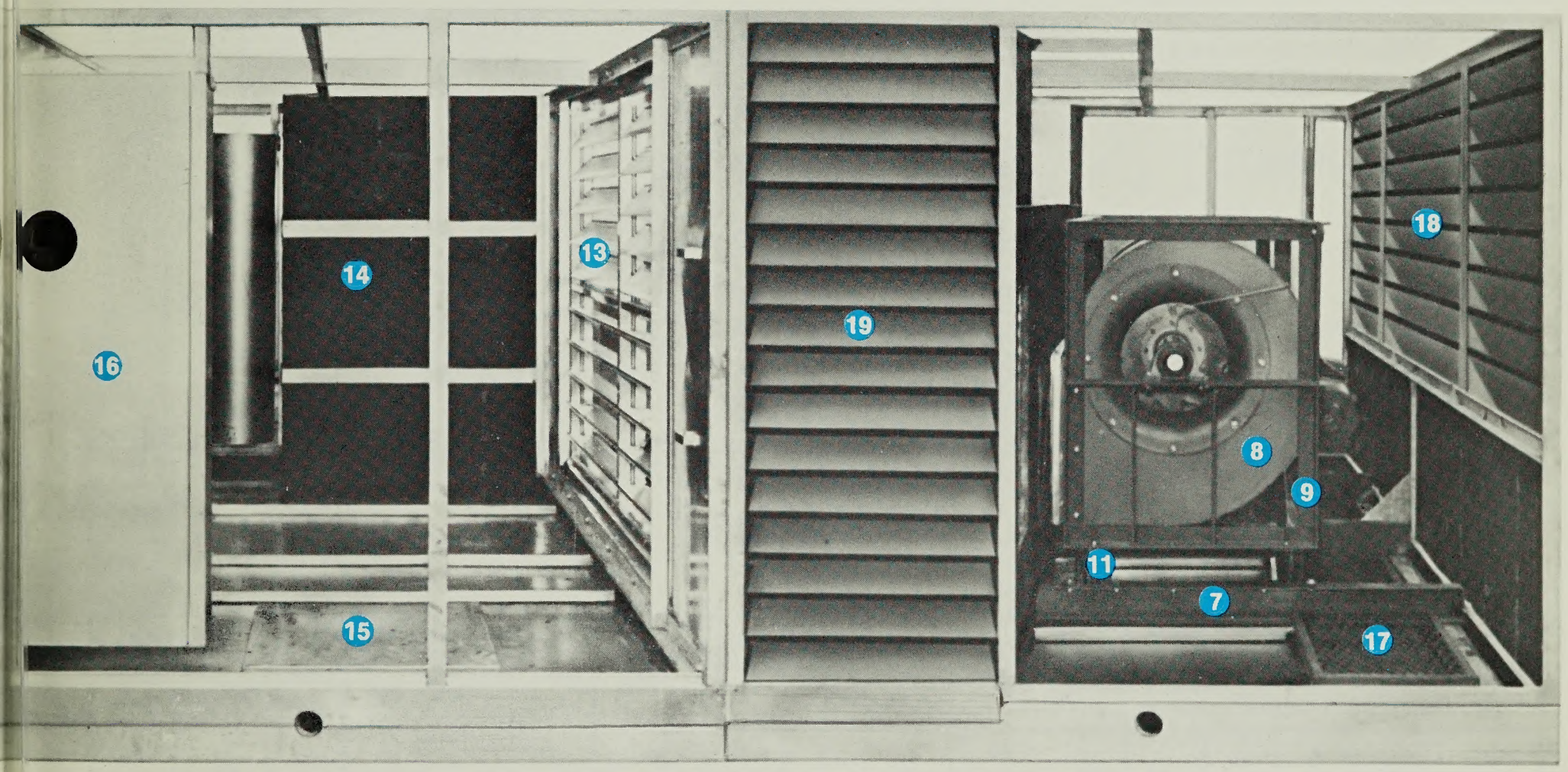
1. Insulated Drain Pan Throughout
2. Air Diffusion Cage
3. ARI Certified Cooling Coil
4. Insulated Hot/Cold Deck "Splitter"
5. Mounting Plate for Damper Operators
6. Steam or Hot Water Heating Coil

SUPPLY FAN SECTION

7. Welded Channel Base
8. AMCA Rated Fans
9. Welded Structural Fan Carrier
10. Optional Welded Frame Construction
11. Internal Fan Isolation
12. PreHeat Coil



SATISFACTORY YEARS OF SERVICE



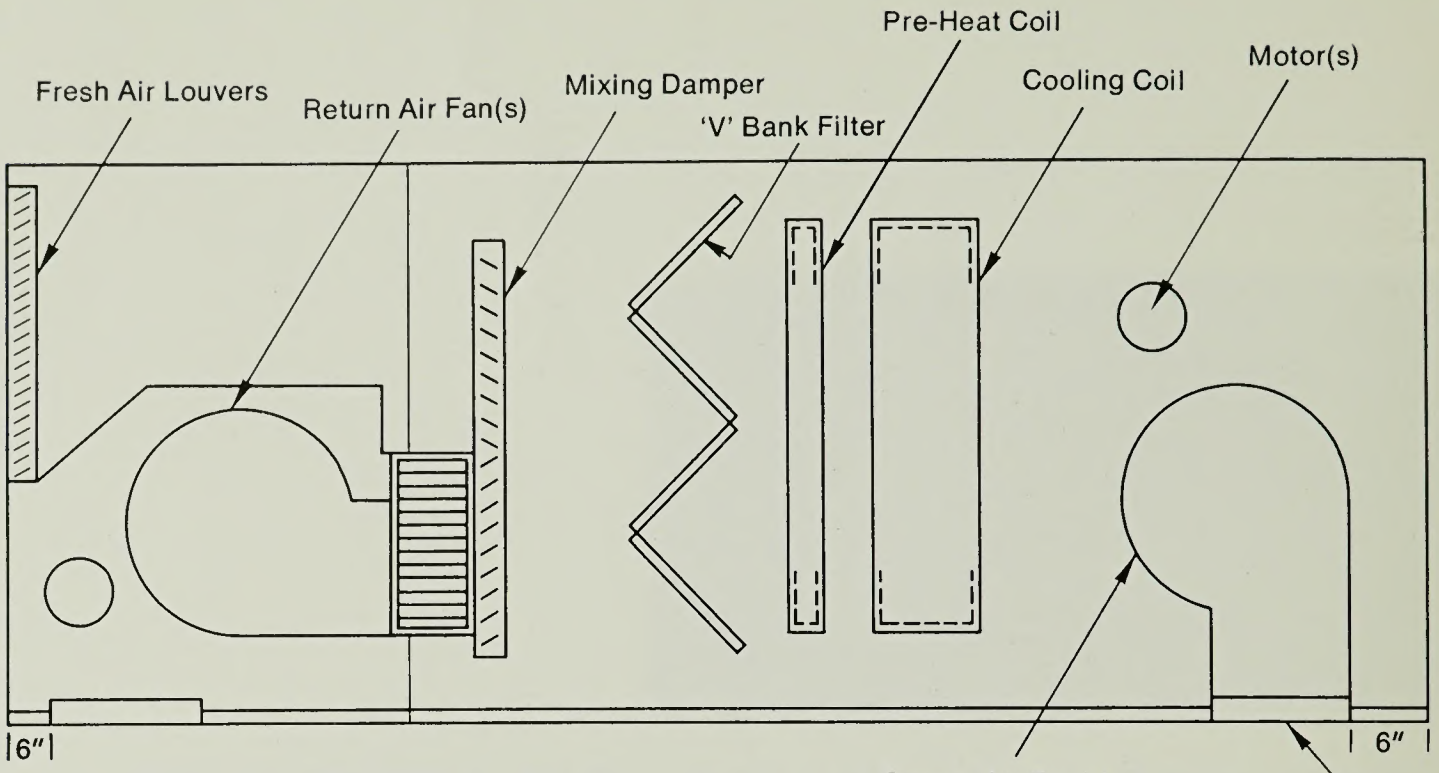
FILTER SECTION

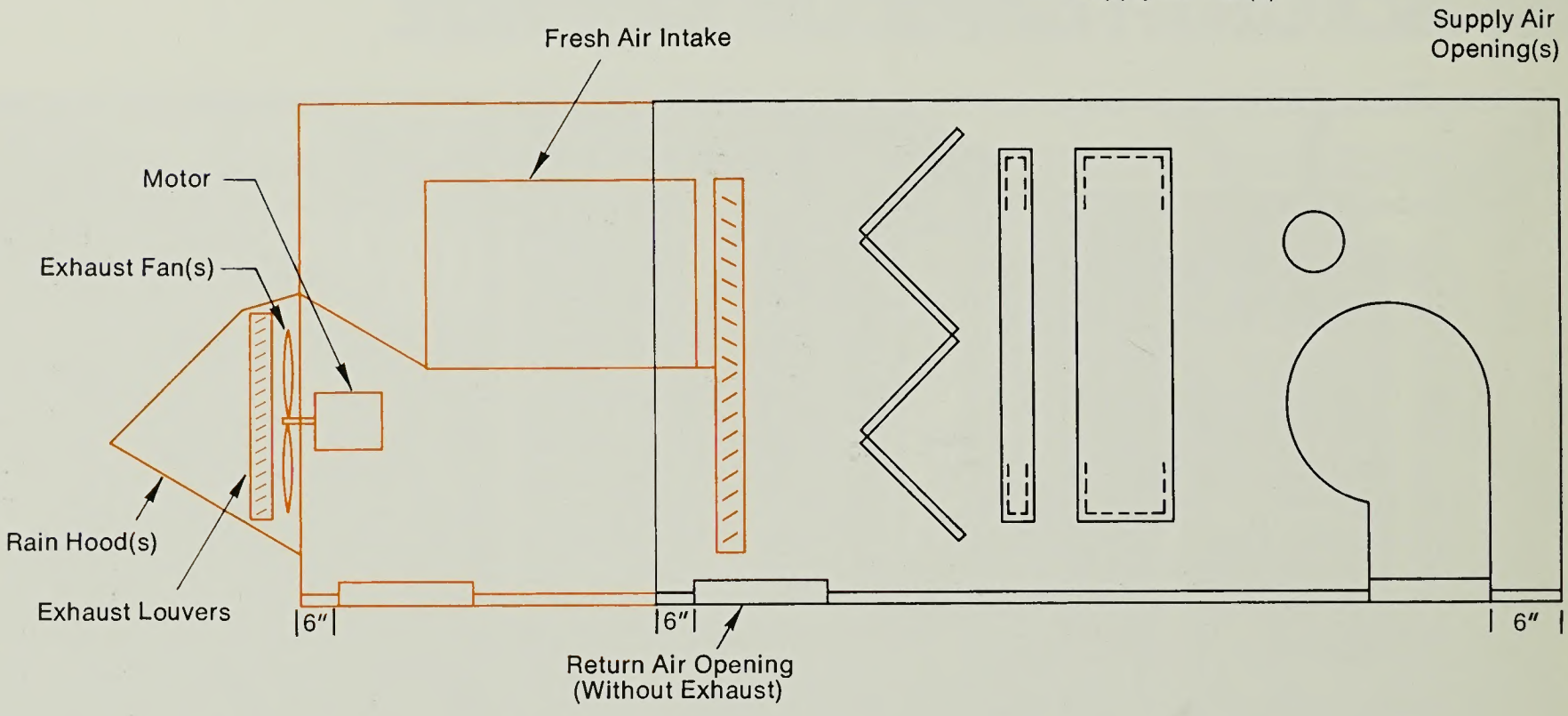
13 Mixing Dampers
14 Electrical Closet
15 Access Thru Bottom of Unit
16 Automatic Roll Filter

RETURN AIR—ECONOMIZER SECTION

17 Return Air Inlet
18 Fresh Air Intake Louver
19 Exhaust Damper and Louver

SINGLE-ZONE UNIT

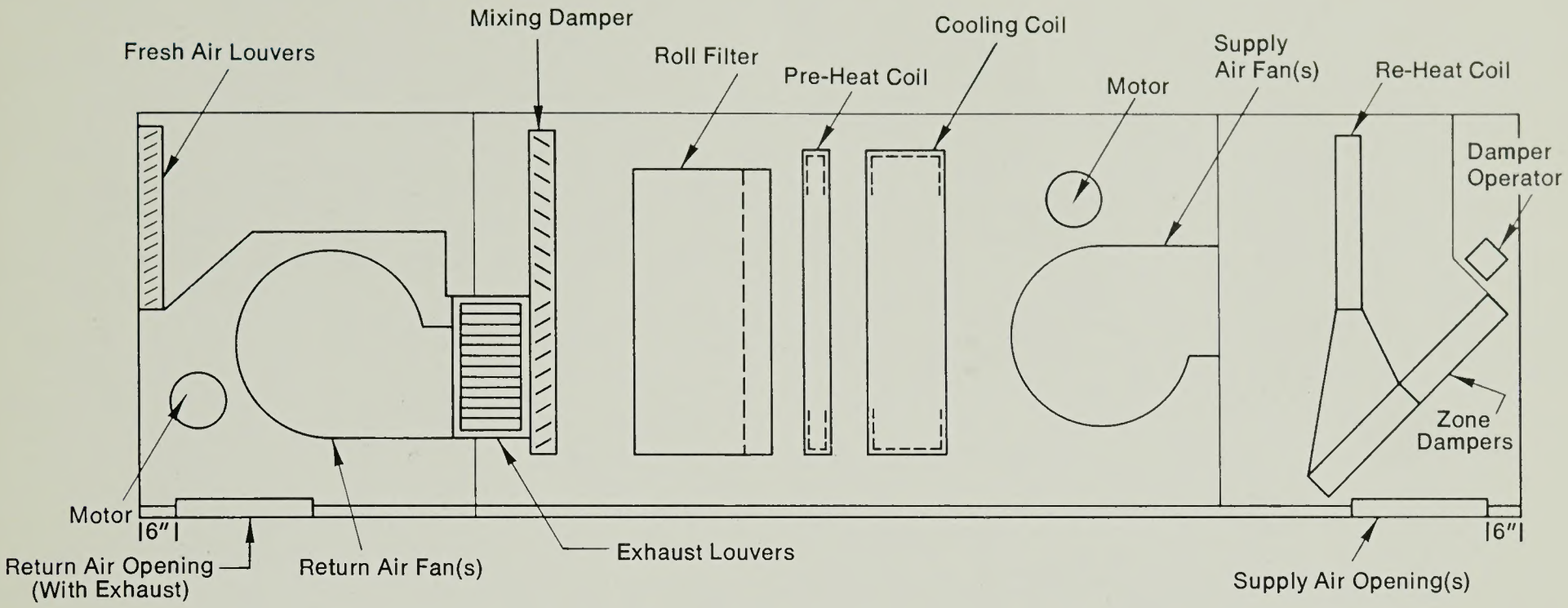


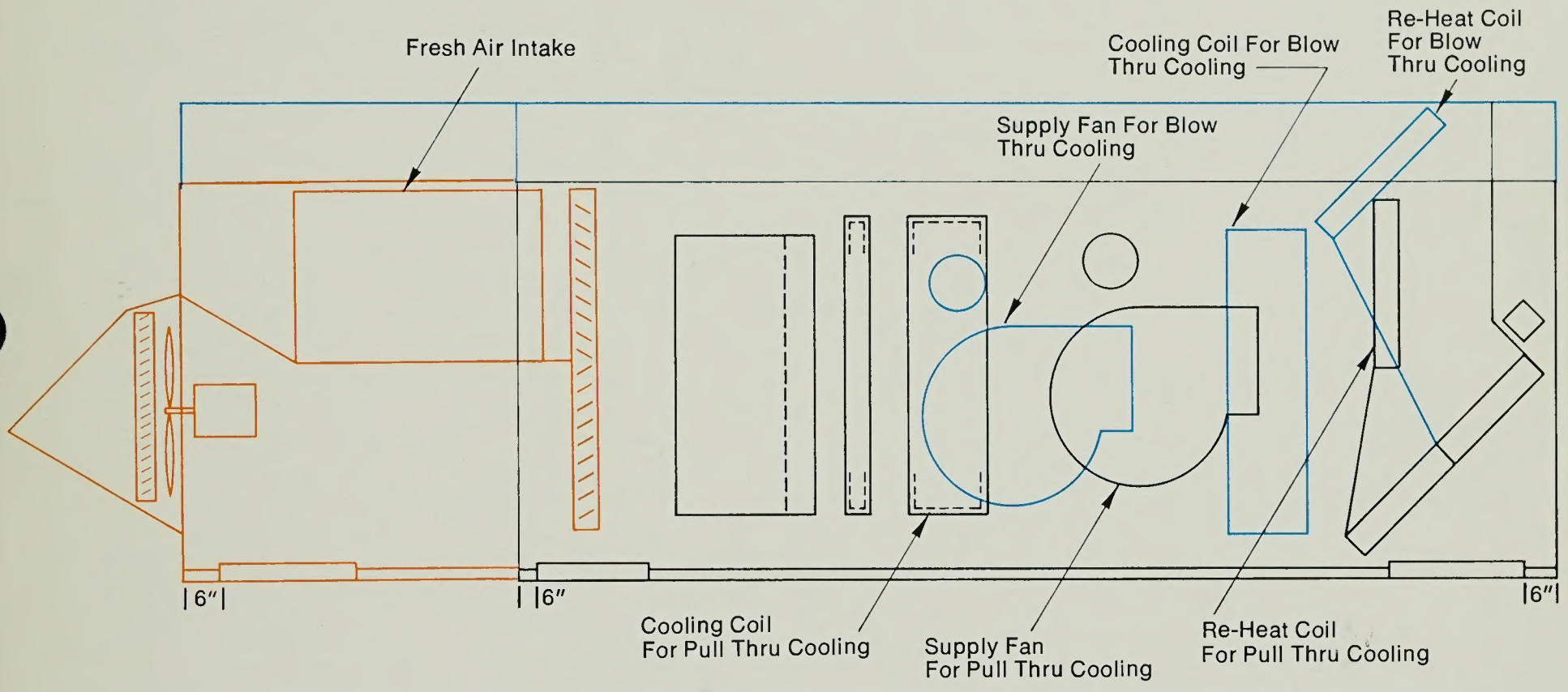


Unit Model No.	CFM Range	Width	Height		Cooling & Heating Coil Sq. Ft.	(1) Supply Fan	Supply Fan H.P.	Return Fan	(5) Returr Fan H.P.	Weight of Basic Unit Lbs.	Length (2)		Supply Air Opening		Return Air Opening	
			Basic	Face Bypass							(3) Basic	(4) With Exh.	Length	Width	Length	Width
50-115	6000-8000	80	51	57	14.5	2:K	7½	2:K	3	2500	123	172	16	57	14	68
50-122	8500-12,000	94	60	74	21.8	2:N	7½	2:P	5	3600	130	182	19	66	17	82
50-133	12,500-18,000	106	75	88	32.8	2:P	15	2:P	7½	4500	139	185	21	76	23	94
50-148	18,500-26,000	128	84	100	47.3	2:222	20	2:222	15	5400	153	207	24	75	27	116
50-162	26,500-34,000	140	99	119	61.8	2:270	20	2:270	15	6500	166	226	29	109	32	128
50-173	34,500-40,000	140	110	136	72.7	2:300	25	2:300	15	7500	178	245	32	111	38	128

NOTE: All dimensions are in inches.
(1) Supply fan motor horsepower is based on ½" E.S.P., 4 row 7 fins/inch cooling coil, 2 row 8 fins/inch heating coil.
(2) These lengths do not include electric control cabinet, add width of cabinet plus 6".
(3) Deduct 15" for flat bank filter.
(4) With either propeller or centrifugal fan.
(5) Return fan motor horsepower based on ⅓" E.S.P.

MULTI-ZONE UNIT




Fresh Air Intake
Cooling Coil For Blow Thru Cooling
Re-Heat Coil For Blow Thru Cooling
Supply Fan For Blow Thru Cooling
6"
6"
6"
Cooling Coil For Pull Thru Cooling
Supply Fan For Pull Thru Cooling
Re-Heat Coil For Pull Thru Cooling

Unit Model No.	CFM Range	Width	Height		Cooling & Pre-heat Coil Sq. Ft.	(1) Supply Fan	Supply Fan H.P.	Return Fan	(5) Return Fan H.P.	Weight of Basic Unit Lbs.	Length (2)		Reheat Coil (2 Row) Sq. Ft.	Supply Air Opening		Return Air Opening	
			Basic	Blow Thru Cooling							(3) Basic	(4) With Exh.		Length	Width	Length	Width
50-215	6000-8000	80	51	57	14.5	2:J	10	2:K	3	3000	157	206	8.0	18	68	14	68
50-222	8500-12,000	94	60	74	21.8	2:N	10	2:P	5	4100	178	230	12.0	23	82	17	82
50-233	12,500-18,000	106	75	88	32.8	2:P	15	2:P	7½	5100	202	248	18.0	32	94	23	94
50-248	18,500-26,000	128	84	100	47.3	2:222	20	2:222	15	6000	227	281	26.0	37	116	27	116
50-262	26,500-34,000	140	99	119	61.8	2:270	30	2:270	15	7300	254	314	34.0	45	128	32	128
50-273	34,500-40,000	140	110	136	72.7	2:300	40	2:300	15	8300	278	345	40.0	52	128	38	128

NOTE: All dimensions are in inches.
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